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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,847

06/28/2006

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EXAMINER

KING, FELICIA C

ART UNIT

PAPER NUMBER

1784

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,847	<b>Applicant(s)</b> NOORDAM ET AL.	
	<b>Examiner</b> FELICIA C. KING	<b>Art Unit</b> 1784	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 19-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/19/10</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This Office Action is written in response to Applicants' Remarks filed 5/19/10.

#### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. **Claims 1-7, 10, 19, 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanekawa et al. (US 4,303,680) and in further view of Morishige (US 4,851,390).**

**Regarding Claims 1, 2, 5, 6, 7, 19, 20-22:** Tanekawa discloses a method for making a flavorful 5' – ribonucleotide by autolysing yeast cells to the point where 50% to 80% of the RNA remain not decomposed (in degradable form, associated with the cell wall) in the cell wall [col. 2, lines 32-36, 12-15; col. 3, lines 31-40], extracting (recovering) RNA from the autolysed yeast before separating it from the cell wall portions [col. 4, lines 13-16] and where the RNA is converted to 5'-ribonucleotides in the presence of cell wall residue and where the cell wall residue is separated after the RNA conversion [col. 4, lines 16-18; Claim 1] but does not disclose where the autolysate is subjected to a solid/liquid separation in order to recover RNA portion. However, Morishige discloses a method of producing a nutritional RNA extract where the initial steps consist of treating yeast and then centrifuging the yeast and recovering the precipitated fraction (solid fraction) and subjecting the solid fraction containing the RNA to further experimentation [col. 2, lines 12-14, 25-28].

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Tanekawa and Morishige before him or her to modify the process of Tanekawa to include a step where the autolysate is centrifuged in order to obtain the cell wall portion because as disclosed in Tanekawa, the cell wall portion contains 50%-80% intracellular RNA

Art Unit: 1784

which is only partially decomposed and because the centrifuged portion is composed mainly of RNA [col. 2, lines 25-28] thus it would have been obvious to centrifuge and recover the portion containing abundant and intact RNA.

**Regarding Claims 3 and 4:** Tanekawa discloses where the autolysis is initiated by enzymatically disrupting the cells walls by activating endogenous enzymes [col. 3, lines 62-65] where it is well known in the art that autolysis means “self splitting”.

**Regarding Claim 10:** Tanekawa discloses converting RNA to 5'-ribonucleotides by 5'-phosphodiesterase and if desired with 5'-phosphodiesterase and deaminase [col. 4, lines 20-25].

**3. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanekawa et al. (US 4,303,680) and Morishige (US 4,851,390) as applied to claim 1 above and in further view of Halasz (1991 CRC Press, Inc pg. 248).**

**Regarding Claim 8 and 9:** Tanekawa teaches a method of making a flavoring 5' – ribonucleotide by autolysing yeast cells as discussed above but does not disclose subjecting the autolysate to ultrafiltration and where after the autolysate is ultrafiltered the RNA containing cell wall and RNA recovered from the soluble fraction are converted to 5'-ribonucleotides. However, Halasz discloses yeast extracts can be produced by ultrafiltering autolysates [pg. 248].

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Tanekawa, Morishige, and Halasz before him or her to modify the process of Tanekawa to include a step where the autolysate is subjected to ultrafiltration prior to enzyme conversion because Halasz discloses that ultrafiltration eliminates or reduces the amount of proteins and components that contribute to bitterness in yeast extract thereby producing a more organoleptically appealing composition.

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 4, 7, and 10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 6, 8, 9, 11, 13, 20, 26, 27 and 30 of copending Application No. 10/541,194. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are directed towards a method for producing a 5'-ribonucleotide composition where a microorganism is treated to release cell contents where the instant application calls this process autolysis. Utilizing and converting RNA released from cell wall material. Further both applications aim to convert RNA to 5'-ribonucleotides by using 5'-phosphodiesterase or both 5'-phosphodiesterase and deaminase.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Art Unit: 1784

***Response to Arguments***

6. Applicant's arguments, see pages 2-5, filed 5/19/10, with respect to the rejections of claims 1-7, and 19-22 under Tanekawa et al. (US 4,303,680) have been fully considered and are persuasive. The rejections of claims 1-7 and 19-22 have been withdrawn.

7. Applicant's arguments, see page 5, filed 5/19/10, with respect to the rejections of claims 8 and 9 under Tanekawa et al. (US 4,303,680) as evidenced by Halasz (1991 CRC Press, Inc pg. 248) have been fully considered and are persuasive. The rejections of claims 8 and 9 have been withdrawn.

8. Applicant's arguments, see page 5 filed 5/19/10 in regards to the rejection of claims 1-7, and 19-22 under Tanekawa et al. (US 4,303,680) Morishige (US 4,851,390) have been fully considered but they are not persuasive.

Applicants request withdrawal of the rejection because of the distinctions between the claimed invention and Tanekawa discussed on pages 2-5 of the rejection. Examiner points out that the rejection was an obviousness rejection under both Tanekawa et al. (US 4,303,680) and Morishige (US 4,851,390) and that the argument made by Applicants was not convincing since it only considers disclosures made by the Tanekawa reference. Although an obviousness argument was not made by Applicants, Examiner notes that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicants also state that nothing in the Morishige reference would have brought one skilled in the art closer to claimed invention. Examiner disagrees because Applicants have not pointed out

Art Unit: 1784

how the Morishige reference does not make up for the deficiency found in the Tanekawa reference.

Below, Examiner addresses how Morishige makes up for the deficiency of Tanekawa.

On pages 2- 5 of the remarks Applicants assert in general that the claimed invention and Tanekawa differ in that, in the claimed invention, the solid and liquid components of autolysed yeast cells are separated, and the solid portion is further treated to convert RNA to 5' ribonucleotides. In the Tanekawa reference, the liquid portion is treated to convert RNA to 5' ribonucleotides or the liquid and solid portions are treated together to convert RNA to 5' ribonucleotides and then the solid portion is removed.

The Morishige reference discloses a method of producing a nutritional RNA extract. The steps consist of treating yeast (heating for a time), centrifuging the yeast, recovering the precipitated fraction (solid fraction), and then subjecting the solid fraction containing the RNA to further experimentation. Morishige discloses that the solid portion of yeast cells, obtained after disrupting the cells, contains a desirable amount of RNA [col. 4, lines 6-22, col. 3, lines 41-46]. It would have been obvious to one of ordinary skill in the art to take the solid fraction in Tanekawa, which Morishige discloses as containing RNA, and to further subject the solid portion to enzyme treatment to produce 5'ribonucleotides. Further, as disclosed by Tanekawa, it is possible and not detrimental to the production of 5'ribonucleotides, to extract RNA from the solid and liquid portions together before discarding the solid portion. This is further indicative of evidence the Tanekawa acknowledges the presence of RNA in the cell wall containing portion of the autolysed yeast.

Examiner further notes that the rejections of claims 8 and 9 under Tanekawa, Morishige, and Halasz (1991 CRC Press, Inc pg. 248) were not addressed by Applicants.

Art Unit: 1784

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FELICIA C. KING whose telephone number is (571)270-3733. The examiner can normally be reached on Mon- Thu 7:30 a.m.- 5:00 p.m.; Fri 7:30 a.m. - 4:00 p.m. alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1784

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/F. K./

Examiner, Art Unit 1784

/Timothy M. Speer/

Primary Examiner, Art Unit 1784